

Reptilia, Serpentes, Dipsadidae, Liophis taeniogaster Jan, 1863: Distribution extension, new state record and geographic distribution map

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ABSTRACT: The current work provides a new state record for the snake *Liophis taeniogaster* in Atlantic Forest of northeastern Brazil.

The genus Liophis Wagler, 1830 includes more than 30 recognized species and more than 60 subspecies distributed throughout Central and South America (Dixon 1989; Fernandes et al. 2002; Esqueda et al. 2005). In Brazil, there are currently 20 Liophis species (Bérnils 2010) excluding species of the recently resurrected genus Lygophis (Zaher 2009; Vidal et al. 2010). This genus is divided into some morphological complex groups as the L. almadensis group (Dixon and Thomas 1985), the L. taeniurus group (Dixon 2000), the L. miliaris group (Dixon 1983a), the Eastern Caribean group (Dixon 1981), and the L. cobellus group (Dixon 1983b).

The Liophis cobellus group, as currently recognized, includes four species: L. breviceps Cope, 1860, L. cobellus (Linnaeus, 1758), L. frenata (Werner, 1909), and L. taeniogaster Jan, 1863 (Fernandes et al. 2002). Liophis breviceps and Liophis cobellus are distributed only in northern portion of Amazon basin, while *Liophis frenata* occurs in central-southwest Brazil, east Paraguay and north Argentina (Dixon 1989; Giraudo 2001). Liophis taeniogaster is the most widely distributed species of this group, presenting apparently two disjoint populations, one in northeastern Brazil ranging from south Bahia to Pernambuco and Maranhão, and another one in Amazon Basin until Lomalinda, Colombia, south to Buena Vista, Bolivia, east to the state of Mato Grosso, Brazil (Fernandes et al. 2002).

The *Liophis taeniogaster* differs from the other snakes of the *L. cobellus* group by having eight supralabials and more than 16 maxillary teeth (L. breviceps has seven supralabials and less than 16 maxillary teeth), usually less than 33 ventral bands (L. cobellus has usually more than 43 ventral bands), and less than 168 ventral scales (L. frenata has more than 183 ventrals) (Fernandes et al. 2002).

On 08 March 2010, we collected a specimen of *Liophis* taeniogaster (Figure 1) in the city of Rio Tinto, state of Paraíba. The individual was recorded being active on an

off road at 07:00 h (6°48'20" S, 35°04'39" W). Despite the snake was recorded in a disturbed area, the city is close to one of the most important reserves of northeast Atlantic forest, the Reserva Biológica Guaribas. This reserve is a patch with 4.028 ha included in the 2 % of the original forest remaining of northeast Atlantic forest (Silva and Tabarelli 2000), and encloses several fauna and flora species characteristic of the region. The Reserva Biológica Guaribas presents two different vegetation formations (Salgado et al. 1981): semi-deciduous rainforest (primary and secondary formation) and savanna.



FIGURE 1. Liophis taeniogaster from municipality of Rio Tinto, PB, Brazil (Photo by FGRF).

The snake agrees with the description of *L. taeniogaster* given by Fernandes et al. (2002): female with 148 mm snout-vent length, 35 mm caudal length, 2 g weight, $supralabials\,8/8, in fralabials\,10/10, dorsal\,scales\,in\,17-17-$ 15 rows; ventrals 130; cloacal divided; paired subcaudals 46. The specimen was collected (collection permits SISBIO 21799-1) and deposited in Coleção Herpetológica da Universidade Federal da Paraíba (CHUFPB, voucher number RT0005). This is the first record of this species for the state of Paraíba, Brazil (Figure 2).

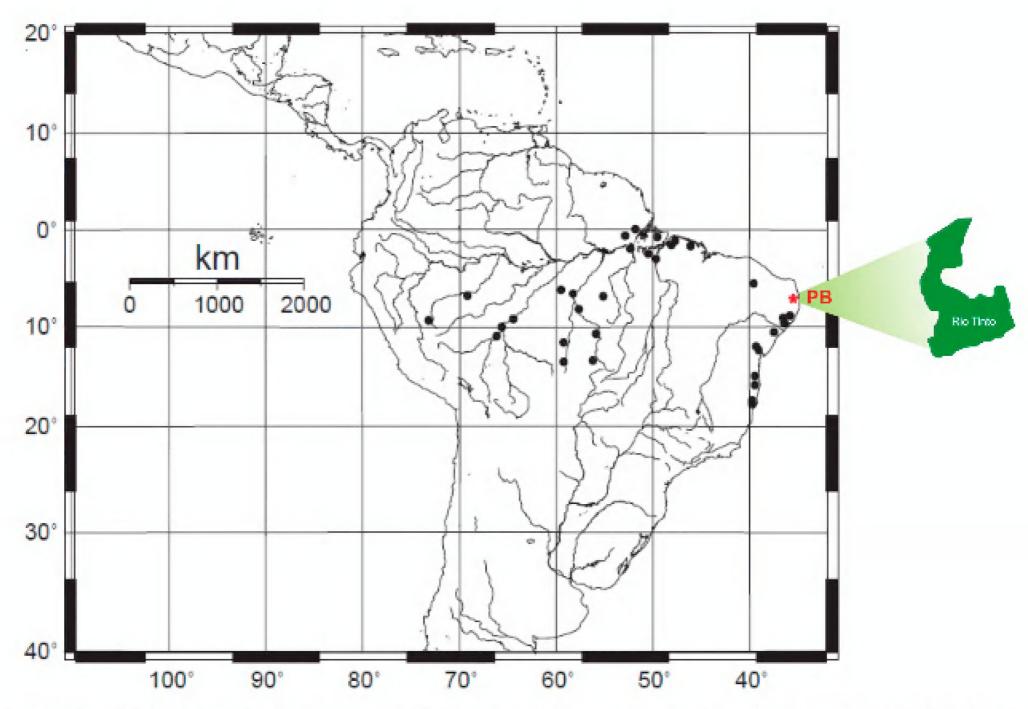


FIGURE 2. Geographic distribution of *Liophis taeniogaster*. Black circles represent the species distribution according to Fernandes *et al.* (2002). The red star represents the municipality of Rio Tinto, Paraíba, Brazil.

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LITERATURE CITED

Bérnils, R.S. (org.). 2010. Brazilian reptiles – List of species. Electronic Database Accessible at http://www.sbherpetologia.org.br/. Sociedade Brasileira de Herpetologia. Captured on 18 November 2010.

Dixon, J.R. 1981. The neotropical colubrid snake genus Liophis: the eastern Caribbean complex. Copeia 1981(2): 296-304.

Dixon, J.R. 1983a. Taxonomic status of the South American snakes Liophis miliaris, L. amazonicus, L. crysostomus, L. mossorensis and L. purpurans (Colubridae: Serpentes). Copeia 1983 (3): 791-802.

Dixon, J.R. 1983b. The Liophis cobella group of the neotropical colubrid snake genus *Liophis*. *Journal of Herpetology* 17(2): 149-165.

Dixon, J.R. 1989. A key and checklist to the neotropical snake genus Liophis with country list and maps. Smithsonian Herpetological Information Service 79:1-28.

Dixon, J.R. 2000. Ecuadorian, Peruvian, and Bolivian Snakes of the Liophis taeniurus complex with descriptions of two new species. Copeia (2):482-490.

Dixon, J.R. and R.A. Thomas. 1985. New Species of South American Water Snake (Genus Liophis) from Southeastern Brazil. Herpetologica 41(3): 259-262.

Esqueda, L.P., M. Natera, E. La Marca and M. Ilija-Fistar. 2005. Nueva espécie de serpiente (Reptilia: Colubridae: Liophis) de um bosque tropical relictual em El Estado Barinas, Venezuela. Herpetotropicos 2(2): 95-103.

Fernandes, D.S., V.J. Germano, R. Fernandes and F.L. Franco. 2002. Taxonomic status and geographic distribution of the lowland species of the Liophis cobella group with comments on the species from the Venezuelan tepuis (Serpentes: Colubridae). Boletim do Museu Nacional, Nova serie, Zoologia 481: 1-14.

Giraudo, A. 2001. Serpientes de la Selva Paranaense y del Chaco Húmedo. Buenos Aires: Literature of Latin America. 328 p.

Salgado, O.A., S.J. Filho and L.M.C. Gonçalves. 1981. As regiões fitoecológicas, sua natureza e seus recursos econômicos. Estudo fitogeográfico; p. 485-544 In Projeto RADAMBRASIL, Levantamento de Recursos Naturais, vol. 23, Folhas SB 24/25, Jaguaribe / Natal. Rio de Janeiro: Ministerio das Minas e Energia.

Silva, J.M.C. and M. Tabarelli. 2000. Tree species impoverishment and the future flora of the Atlantic forest of northeast Brazil. Nature 404: 72-

Vidal, N., M. Dewynter and D.J. Gower. 2010. Dissecting the major American snake radiation: A molecular phylogeny of the Dipsadidae Bonaparte (Serpentes, Caenophidia). Comptes Rendus Biologies 333: 48-55.

Zaher, H., F.G. Grazziotin, J.A. Cadle, R.W. Murphy, J.C. Moura-Leite and S.L. Bonatto. 2009. Molecular phylogeny of advanced snakes (Serpentes, Caenophidia) with an emphasis on South American Xenodontines: a revised classification and descriptions of new taxa. Papéis Avulsos de Zoologia 49(11): 115-153.

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